



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report



For the week ending April 2, 2016 - Week 13

All data presented in this report are provisional and may change as additional reports are received

Quick Stats	
Percent of outpatient visits for ILI ¹	1.26% (baseline 1.7%)
Percent of influenza rapid test positive	15.1% (202/1340)
Percent of RSV rapid tests positive	15.6% (34/218)
Percent school absence due to illness ²	2.20%
Number of schools with ≥10% absence due to illness	1
Influenza-associated hospitalizations ³	18/5,447 inpatients surveyed
Influenza-associated mortality -all ages (Cumulative) ⁴	26
Influenza-associated pediatric mortality (Cumulative)	0

¹ ILI: Influenza-like illness is defined as a fever of ≥100° F as well as cough and/or sore throat.
² Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools
³ Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals
⁴ Deaths in which influenza is listed on the death certificate. This is an underestimate of influenza-related deaths.
 Cumulative is 10/4/2015-current week.

Iowa Influenza Geographic Spread ⁵
No Activity
Sporadic
Local
Regional
Widespread

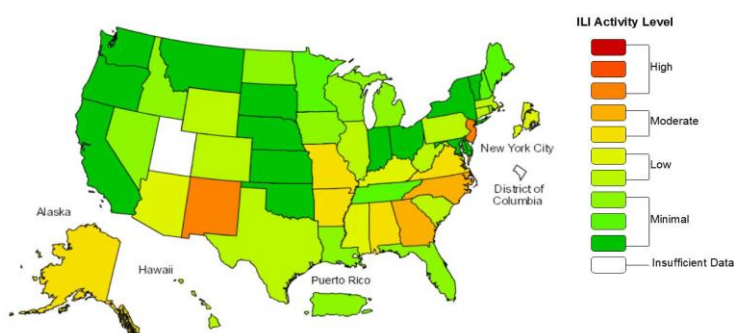
⁵This is based on CDC's activity estimates definition
www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

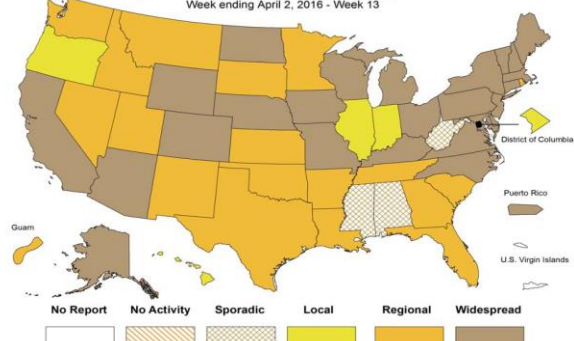
Influenza remains widespread across the state. For this reporting week, the State Hygienic Laboratory (SHL) confirmed 12 cases of influenza A and two cases of influenza B. Eighteen influenza-related hospitalizations were reported from sentinel hospitals. The proportion of outpatient visits due to influenza-like illness (ILI) was 1.26 percent, which is below the regional baseline. One school reported 10 percent or greater absenteeism due to illness which included influenza-like symptoms and three influenza outbreaks were reported in Iowa long-term care facilities. In this reporting week, 18 adenovirus, three parainfluenza virus type 1, 42 rhinovirus/ enterovirus, 16 RSV, and 14 hMPV were detected from surveillance sites.

National activity summary - (CDC):

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
 2015-16 Influenza Season Week 13 ending Apr 02, 2016



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
 Week ending April 2, 2016 - Week 13



Synopsis: During week 13 (March 27-April 2, 2016), influenza activity decreased slightly, but remained elevated in the United States.

Viral Surveillance: The most frequently identified influenza virus type reported by public health laboratories during week 13 was influenza A, with influenza A (H1N1)pdm09 viruses predominating. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.

Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the NCHS Mortality Surveillance System and above the system-specific epidemic threshold in the 122 Cities Mortality Reporting System.

Influenza-associated Pediatric Deaths: Seven influenza-associated pediatric deaths were reported.

Influenza-associated Hospitalizations: A cumulative rate for the season of 24.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.4 percent, which is above the national baseline of 2.1 percent. Eight of 10 regions reported ILI at or above region-specific baseline levels. Two states experienced high ILI activity; seven states experienced moderate ILI activity; New York City and 13 states experienced low ILI activity; Puerto Rico and 27 states experienced minimal ILI activity; and the District of Columbia and one state had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in Puerto Rico and 25 states was reported as widespread; Guam and 18 states reported regional activity; the District of Columbia and four states reported local activity; three states reported sporadic activity; and the U.S. Virgin Islands did not report.

Detailed information can be found online at www.cdc.gov/flu/weekly/.

International activity summary - (WHO):

Globally, elevated levels of influenza activity continued to be reported in North America, in parts of Europe and in Northern Temperate Asia. An increase in influenza B virus activity has been reported in Northern Temperate Asia, South East Asia and Europe. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/. It was last updated 04/04/2016.

Laboratory surveillance program:

The State Hygienic Laboratory (SHL) is the primary lab for influenza testing and reporting in Iowa. SHL reports the number of tests performed and the type and sub-type of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs on a weekly basis for the number of rapid-antigen tests performed, the number positive and the positive non-influenza virus tests. This report also includes the positive non-influenza virus tests reported from the Dunes Medical Laboratories at Mercy Medical Center in Sioux City.

Table 1: Influenza A viruses detected by SHL by age group

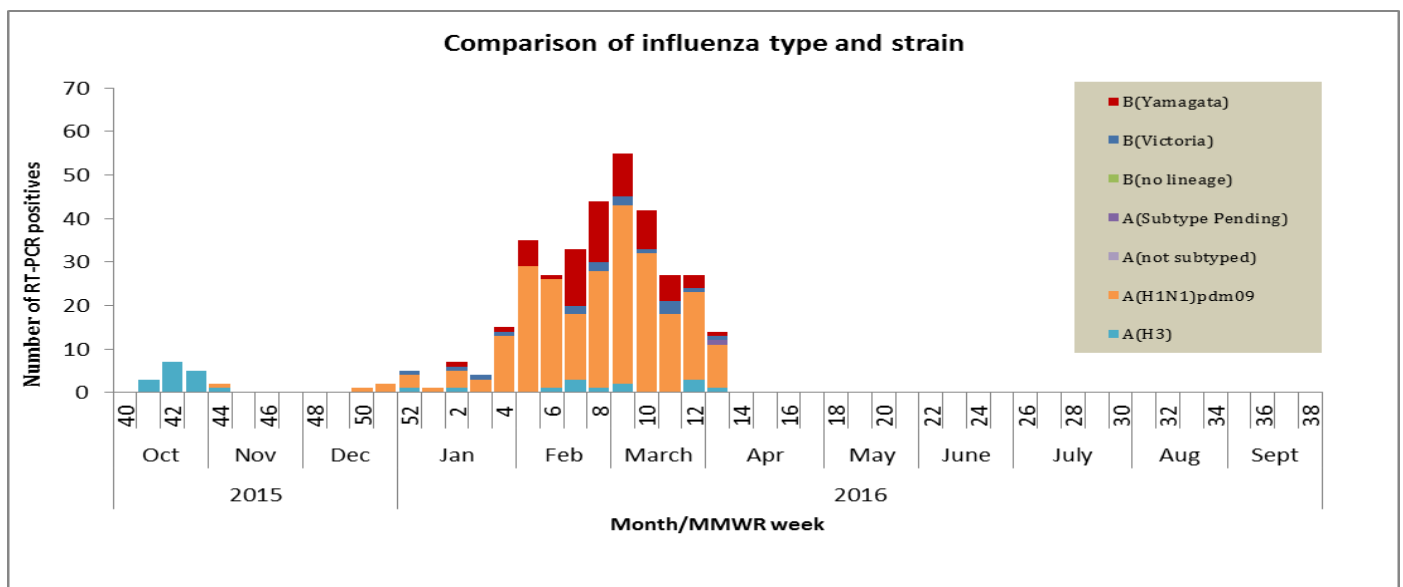
Age Group	CURRENT WEEK				CUMULATIVE (10/4/15 – CURRENT WEEK)			
	Flu A				Flu A			
	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped
0-4	2(20%)	0(0%)	0(0%)	0(0%)	34(14%)	0(0%)	0(0%)	0(0%)
5-17	0(0%)	0(0%)	0(0%)	0(0%)	42(17%)	1(3%)	0(0%)	1(17%)
18-24	4(40%)	1(100%)	1(100%)	0(0%)	32(13%)	8(28%)	1(100%)	1(17%)
25-49	1(10%)	0(0%)	0(0%)	0(0%)	71(29%)	4(14%)	0(0%)	1(17%)
50-64	1(10%)	0(0%)	0(0%)	0(0%)	43(18%)	8(28%)	0(0%)	3(50%)
>64	2(20%)	0(0%)	0(0%)	0(0%)	23(9%)	8(28%)	0(0%)	0(0%)
Total	10	1	1	0	245	29	1	6

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included
"Not subtyped" column is due to weak detections. This can be due to poor collection, timing of collection or stage of infection.

Table 2: Influenza B viruses detected by SHL by age group

Age Group	CURRENT WEEK			CUMULATIVE (10/4/15 – CURRENT WEEK)		
	Flu B			Flu B		
	Victoria Lineage	Yamagata Lineage	Lineage Pending	Victoria Lineage	Yamagata Lineage	Lineage Pending
0-4	0(0%)	0(0%)	0(0%)	4(25%)	7(11%)	0(0%)
5-17	1(100%)	0(0%)	0(0%)	5(31%)	20(31%)	0(0%)
18-24	0(0%)	0(0%)	0(0%)	2(13%)	1(2%)	0(0%)
25-49	0(0%)	0(0%)	0(0%)	2(13%)	16(25%)	0(0%)
50-64	0(0%)	0(0%)	0(0%)	1(6%)	12(19%)	0(0%)
>64	0(0%)	1(100%)	0(0%)	2(13%)	9(14%)	0(0%)
Total	1	1	0	16	65	0

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included



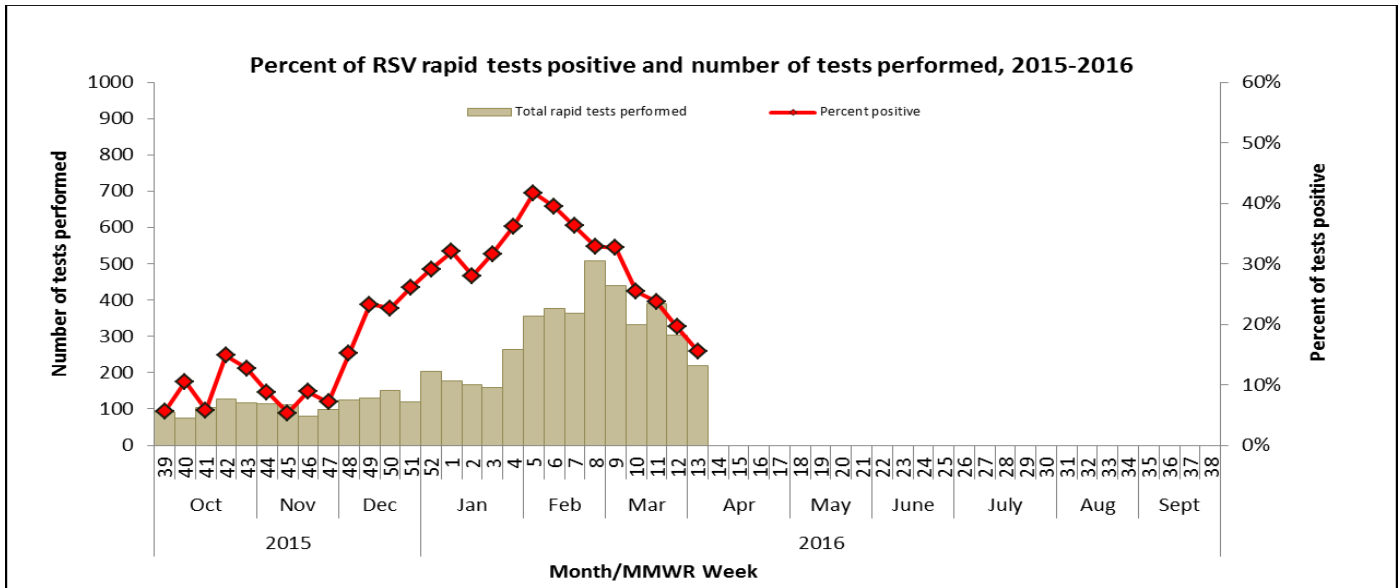
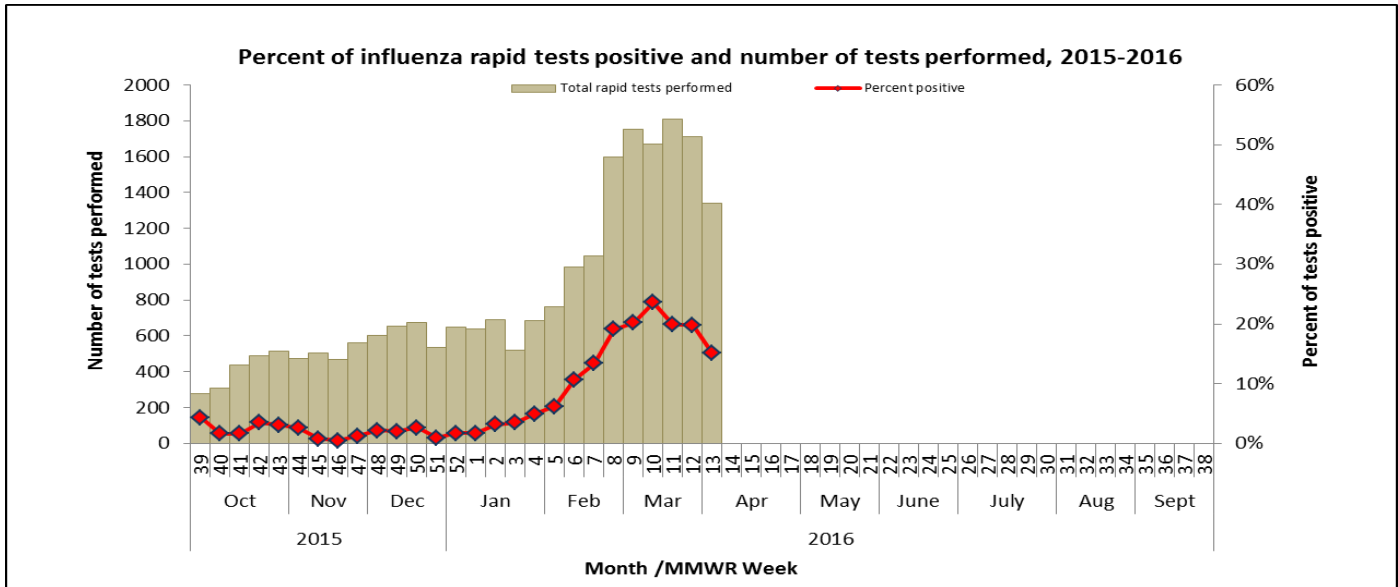
Rapid influenza and RSV test surveillance:

The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of influenza and respiratory syncytial virus (RSV) rapid tests performed and the number of tests positive. This table includes only the number of patients tested for influenza or RSV at laboratory surveillance sites throughout the state. This table does not provide case counts.

Table 2: Percent of influenza rapid tests positive and number of tests performed by region for the present week

REGION*	RAPID ANTIGEN INFLUENZA TESTS				RAPID ANTIGEN RSV TESTS		
	Tested	Flu A	Flu B	% Positive	Tested	Positive	% Positive
Region 1 (Central)	214	33	9	19.6	23	7	30.4
Region 2 (NE)	68	5	0	7.4	17	1	5.9
Region 3 (NW)	205	19	1	9.8	62	6	9.7
Region 4 (SW)	113	16	4	17.7	10	3	30.0
Region 5 (SE)	106	13	1	13.2	12	2	16.7
Region 6 (Eastern)	634	95	6	15.9	94	15	16.0
Total	1340	181	21	15.1	218	34	15.6

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



Non-influenza respiratory viruses:

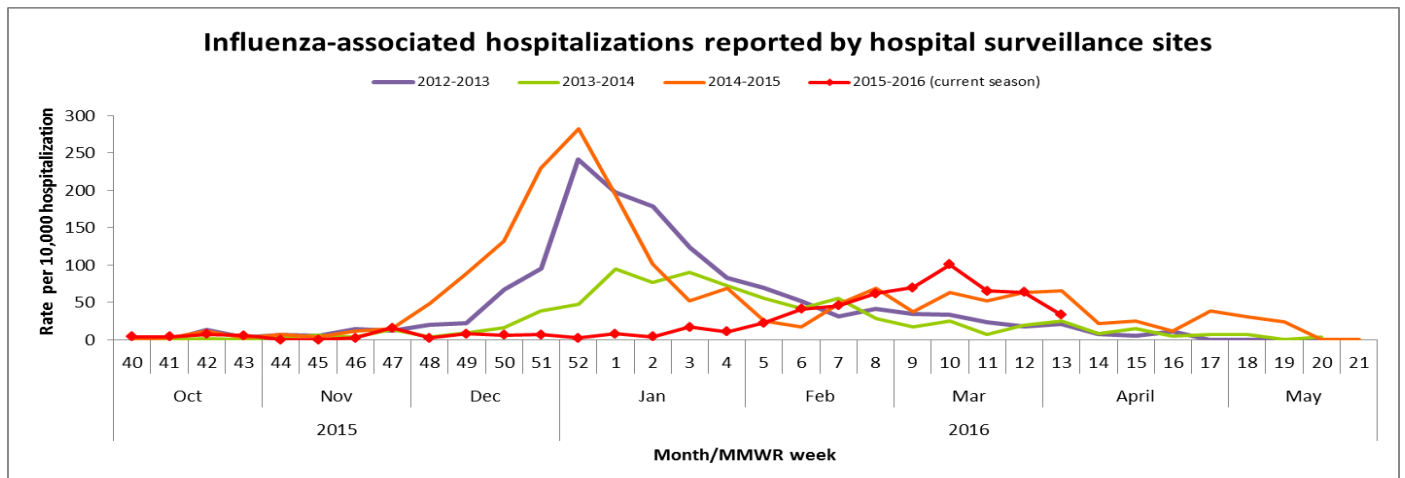
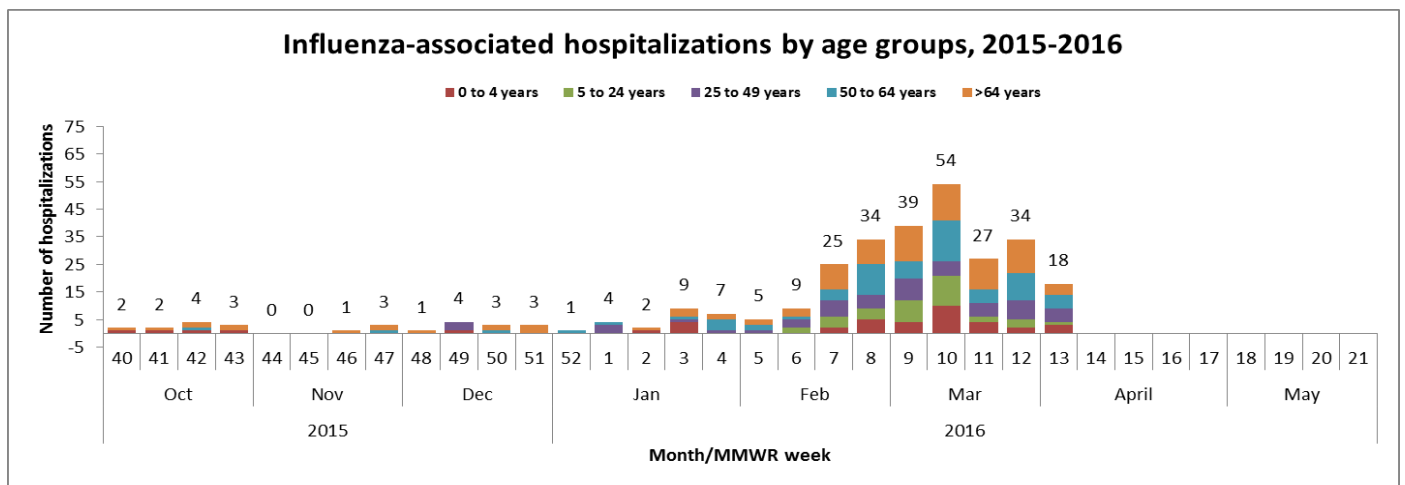
The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of positive tests for non-influenza respiratory viruses. This table also includes the positive non-influenza virus tests reported from the Dunes Medical Laboratories at Mercy Medical Center in Sioux City. The table includes only the number of positive tests at laboratory surveillance sites throughout the state. The table does not provide case counts.

Viruses	CURRENT WEEK	CUMULATIVE (10/4/15 – CURRENT WEEK)
Adenovirus	18	348
Parainfluenza Virus Type 1	3	166
Parainfluenza Virus Type 2	0	4
Parainfluenza Virus Type 3	0	5
Parainfluenza Virus Type 4	0	67
Rhinovirus/Enterovirus	42	870
Respiratory syncytial virus (RSV)	16	664
Human metapneumovirus (hMPV)	14	296
Total	93	2420

Influenza-associated hospitalizations:

Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.

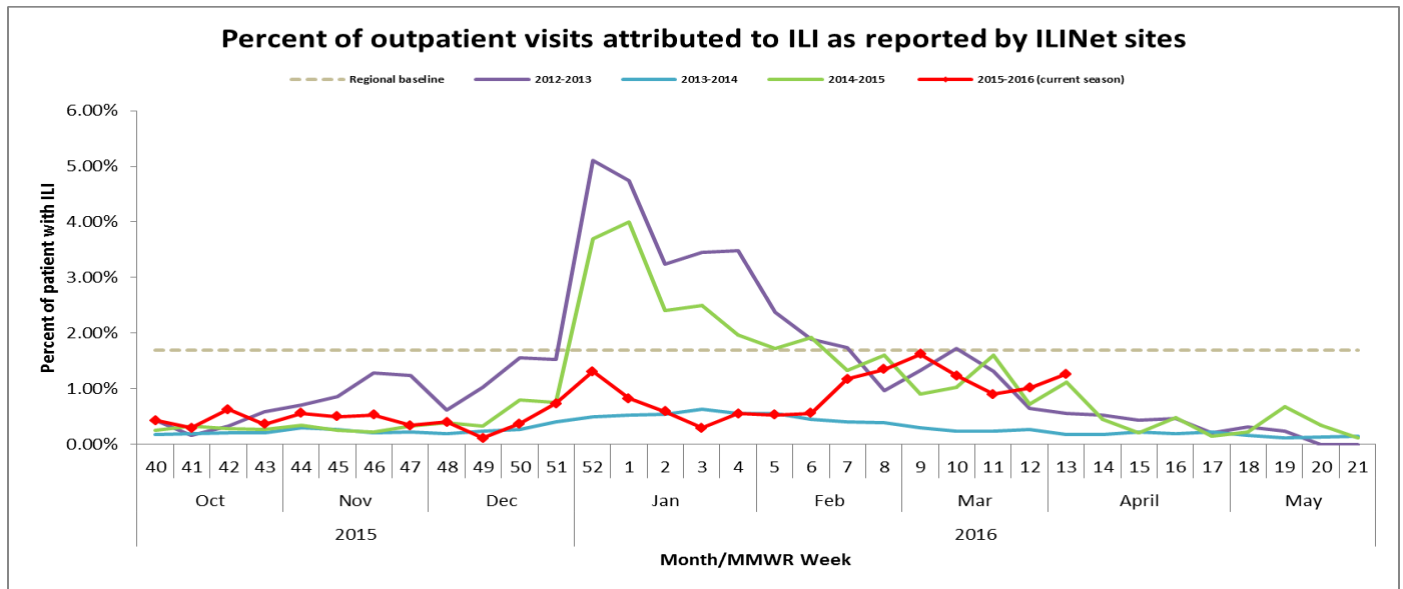
AGE	CURRENT WEEK	CUMULATIVE (10/4/15 – CURRENT WEEK)
Age 0-4	3	40
Age 5-24	1	35
Age 25-49	5	53
Age 50-64	5	69
Age >64	4	97
Total	18	294



Outpatient health care provider surveillance program (ILINet):

Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa's influenza surveillance. Iowa health care providers interested in joining this surveillance program should contact Julie Coughlin at 515-281-7134 or julie.coughlin@idph.iowa.gov for more information.

Week	%ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64
Week 13, ending April 2	1.26	15	2	10	1	2	0
Week 12, ending Mar 26	1.01	12	2	8	0	1	1
Week 11, ending Mar 19	0.90	10	4	1	4	0	1



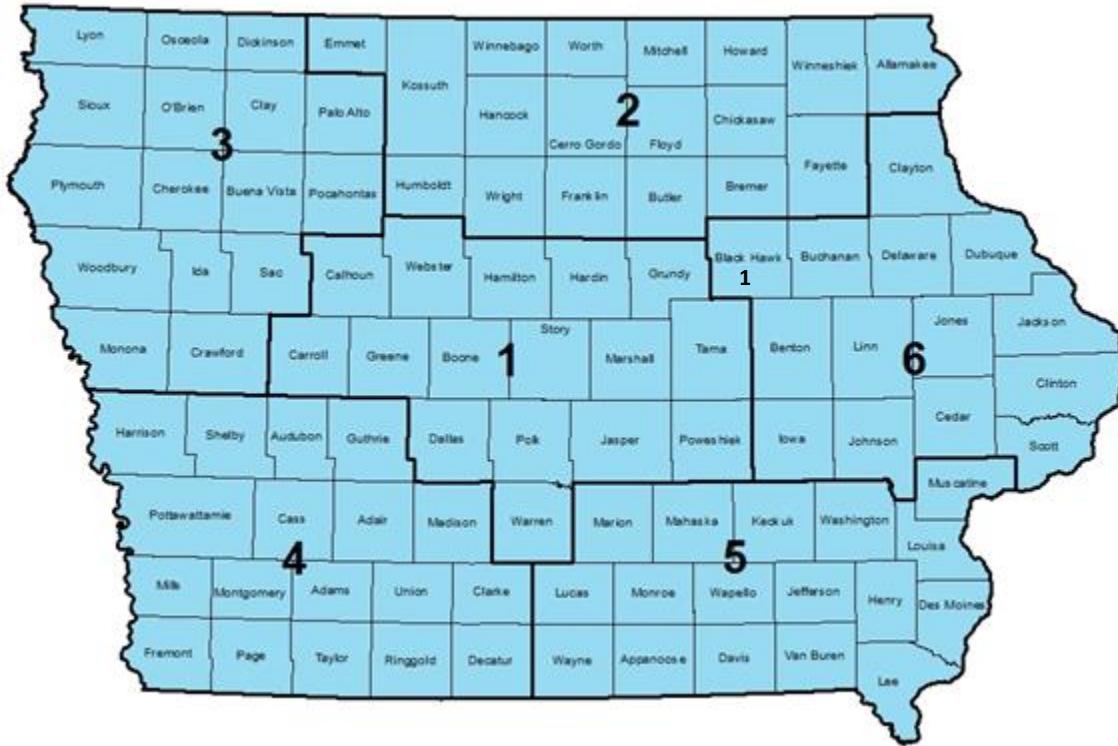
Long-term Care Outbreaks:

REGION*	CURRENT WEEK	CUMULATIVE (10/4/15 – CURRENT WEEK)
Region 1 (Central)	1	2
Region 2 (NE)	0	0
Region 3 (NW)	0	0
Region 4 (SW)	0	1
Region 5 (SE)	2	2
Region 6 (Eastern)	0	0
Total	3	5

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.

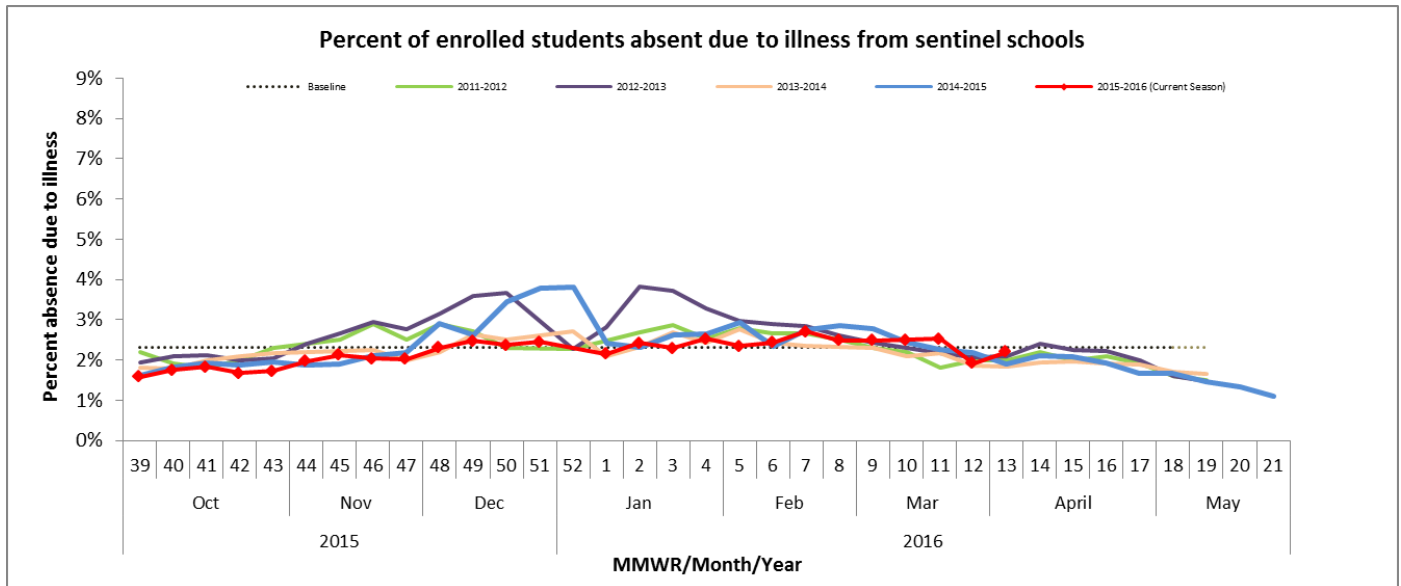
10 percent school absenteeism:

Schools (K-12) track and report when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. A regional map with schools that have $\geq 10\%$ absence due to illness, which includes influenza-like illness, for the current reporting week is displayed below.



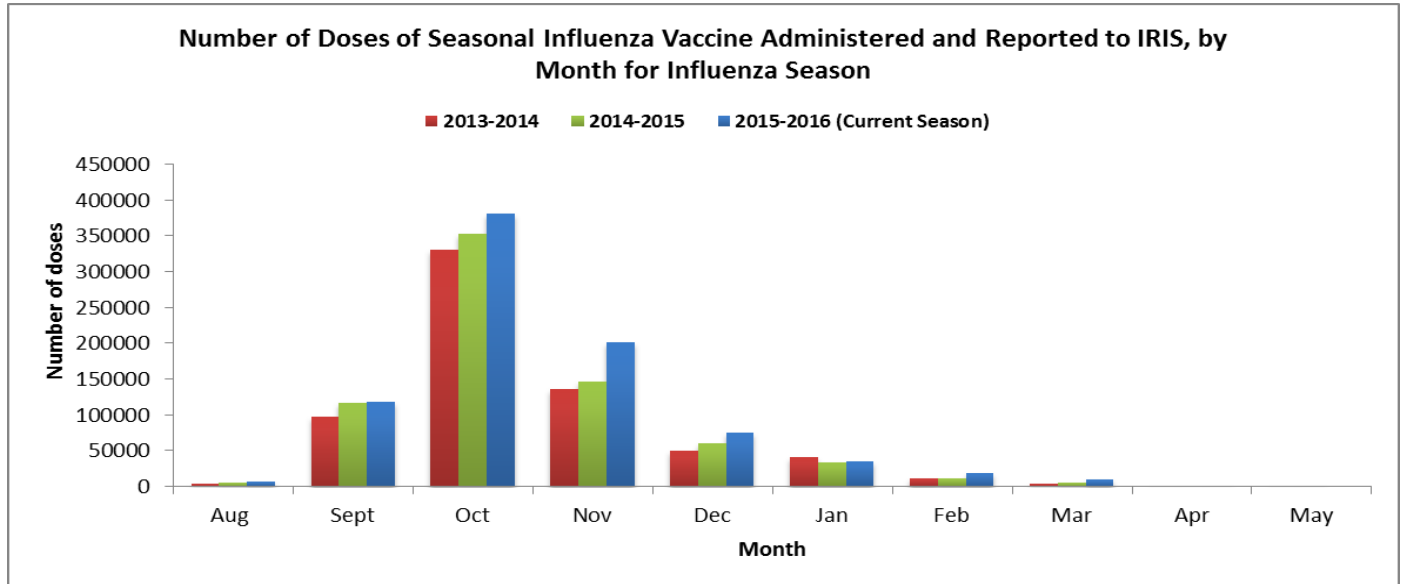
School surveillance program:

Sentinel schools that participate in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week.



Seasonal influenza vaccination:

Seasonal influenza vaccination data in Iowa is based on doses reported to the Iowa Immunization Registry Information System (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunization for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state of Iowa. For more information on the immunization data, contact Kim Tichy, IRIS coordinator at 515-281-4288 or kimberly.tichy@idph.iowa.gov.



Note: The data for the 2015-2016 season is only up to the current week and there is a lag between the vaccine administration date and the date reported to the IRIS. The current season's data will be adjusted as additional data is received.

Other resources:

Vaccine:

Influenza vaccine recommendation: <http://idph.iowa.gov/immmtb/immunization/vaccine>

CDC vaccine information: www.cdc.gov/flu/fag/flu-vaccine-types.htm

Vaccine finder: <http://vaccinefinder.org/>

Neighboring states' influenza information:

Illinois: www.dph.illinois.gov/topics-services/diseases-and-conditions/influenza/surveillance

Minnesota: www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html

Missouri: <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

South Dakota: <http://doh.sd.gov/diseases/infectious/flu/>

Wisconsin: www.dhs.wisconsin.gov/influenza/index.htm